

CLAIMS

1 1. A tube bending fixture comprising:
2 a frame,
3 a lower tube support pivotally mounted to said frame between a first
4 and a second position about a first axis,
5 an upper tube support pivotally mounted to said frame between a first
6 and a second position about a second axis,
7 a bar slidably mounted to said upper tube support and movable between
8 an extended and a retracted position,
9 at least one lower mandrel mounted to said lower tube support and
10 dimensioned to fit within one end of a tube to be bent,
11 at least one upper mandrel mounted to said bar, said upper and lower
12 mandrels being aligned with each other when said upper and lower tube
13 supports are in said first pivotal position, said upper mandrel dimensioned to fit
14 within a second end of the tube to be bent when said bar is in said extended
15 position, said upper mandrel being spaced from the second end of the tube to
16 be bent when said bar is in said retracted position,
17 a lock mechanism which selectively retains said upper and lower tube
18 supports in said second pivotal position.

1 2. The invention as defined in claim 1 and comprising a first gear
2 secured to said lower tube support coaxial with said first axis and a second gear

3 secured to said upper tube support coaxial with said second axis, wherein said
4 first and second gear are in mesh with each other.

1 3. The invention as defined in claim 2 wherein said lock
2 mechanism comprises a lock pin mounted to said frame which selectively
3 engages an opening in one of said tube supports when said tube supports are in
4 said second pivotal position.

1 4. The invention as defined in claim 1 wherein said frame is
2 U-shaped having two spaced apart and parallel side frame members and a
3 bottom frame member.

1 5. The invention as defined in claim 4 wherein said lower tube
2 support is U-shaped having two spaced apart and parallel side members and a
3 bottom member.

1 6. The invention as defined in claim 5 and comprising a crossbar
2 extending between said side members of said lower tube support and means for
3 adjustably securing said crossbar to said side members of said lower tube
4 support, wherein said at least one lower mandrel is mounted to said crossbar.

1 7. The invention as defined in claim 6 wherein said adjustable
2 securing means comprises a slot formed in each side member of said lower

3 tube support and a pair of fasteners, one fastener extending through each slot
4 and engaging said crossbar.

1 8. The invention as defined in claim 1 and comprising at least one
2 former attached to said frame, said former having a channel which engages an
3 intermediate port of a tube mounted to said upper and lower mandrels, said
4 channel conforming in desired shape to the tube when said upper and lower
5 tube supports are in said second pivotal position.

1 9. The invention as defined in claim 8 wherein said lower mandrel
2 includes a bendable portion which registers with said former.

1 10. The invention as defined in claim 9 wherein said bendable
2 portion of said lower mandrel comprises a spring.

1 11. The invention as defined in claim 9 wherein said bendable
2 portion of said lower mandrel comprises a corrugated metal section.

1 12. The invention as defined in claim 1 and comprising a spring-
2 loaded mount which secures said lower mandrel to said lower tube support.

1 13. The invention as defined in claim 1 and comprising a spring-
2 loaded mount which secures said upper mandrel to said bar.